

Abstract ID : 258

Title : The Effect of Vessel Activity on the Behavior of Migrating Gray Whales (*Eschrichtius robustus*) off Point Loma, California

Category : Behavior

Student : M.A./M.S.

Preferred Format : Either Oral or Poster Presentation

Abstract : The objectives of this study were to determine: (1) if southbound migrating gray whales exhibited changes in behavior when different types of vessel activity occurred in their proximity; and (2) if different whale-watching practices influenced gray whale behavior. During the winters of 1999 through 2001, theodolite tracks and focal animal behavioral data were collected from a shore-based station at Point Loma, California. Multivariate ANOVA analysis with post-hoc comparisons showed that early whales (observed before January 15th) responded differently compared to late whales (observed after January 15th) to varying vessel activity types. Late whales had a higher number of blows per surfacing and greater leg speed variability when vessels were within 0.5 km compared to when no vessels were within 0.5 km ($p = 0.0207$ and $p = 0.0105$). Early whales had lower leg speed variability and lower reorientation rates when vessels were within 0.5 km compared to when vessels actively followed them ($p = 0.0054$ and $p = 0.0237$). Finally, for both early and late whales, surface-dive time was longer when vessels were within 0.5 km compared to when no vessels were within 0.5 km ($p = 0.0141$). Behavioral reactions of early and late whales may differ due to: (1) the higher proportion of pregnant females traveling south during early season; (2) differences in vessel behavior between early and late season. Regardless of season, whales sped up when only one whale-watching vessel actively followed them and slowed down when more than one vessel followed ($F = 4.80$, $p = 0.037$). Also, leg speed variability increased as whale watching session length increased ($t = 8.78$, $p = 0.0159$). This study suggests that gray whales change their behavior in response to nearby whale-watching boats. The number of vessels following a whale and the total length of a whale-watching session appear to elicit the most notable reactions.